



# INTERCOM

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## DOT, FAA Leaders Visit Technical Center

By Stan Ciurczak



FAA Deputy Administrator Bobby Sturgell (left) and DOT Chief of Staff John Flaherty (far right) are briefed by Gary Frings.

Recently, a number of key executives from the Department of Transportation and FAA traveled to the William J. Hughes Technical Center to meet with Dr. Anne Harlan, other Center managers and employees. They also wanted to tour some of the Center's laboratories and other facilities. The most recent visitors to the Center were DOT Chief of Staff John Flaherty, DOT Deputy Chief of Staff Martin Whitmer, FAA Deputy Administrator Robert Sturgell, FAA Chief of Staff David Mandell and FAA Associate Administrator Charles Keegan (ARA-1).

On their visits, Mandell and Whitmer toured the Human Factors lab, the National Airport Pavement Test Facility, the aircraft safety drop test facility and the fire safety R&D area. They received a demonstration and briefing on the recently

Continued on Page 2

## Cheryl Wilkes Named New Civil Rights Manager

By Fanny Rivera

Cheryl Wilkes has been selected as the Civil Rights Officer at the William J. Hughes Technical Center. Wilkes has been a federal employee for 14 years; 13 of which have been in the area of civil rights. During her tenure, she has served as the Technical Center's Discrimination Complaints Program manager. In this role, she managed the EEO Counseling and Alternate Dispute Resolution

Programs. Most recently, in support of the various initiatives defined by the newly established Transportation Security Agency, she singularly provided Model Work Environment briefings to more than 2,500 newly hired Federal Air Marshal employees.

Wilkes holds a bachelor's degree in political science and has completed post graduate work in public adminis-

tration. Her exceptional knowledge of civil rights and the Technical Center will permit her to continue as an invaluable asset to the Civil Rights Office.





## AOS-550 Achieves FAA-iCMM Maturity

By Theresa Mitchell

In August, AOS-550, Communications Infrastructure Support Branch, became the second branch within AOS-500 to achieve FAA-iCMM® Level 2 maturity across all programs and projects.

The Branch, which consists of Capstone, FAA Telecommunications Infrastructure, Information Resource Management and National Airspace Data Interchange Network program areas, provides second-level engineering support and engineering services to operational field facilities, regional offices and Washington Headquarters Program Offices.

Two challenges the team faced in accomplishing its goal were implementing process improvement and ensuring organizational consistency across four very different, diverse program areas. Each program area provides a different type of service to a different customer base. Also, each

program is in a different Acquisition Management System lifecycle phase.

The team, under the sponsorship of Frannette Bourne, AOS-500 division manager, leadership of Mike Gallagher, AOS-550 branch manager, and AOS-550 program area leads, Andy Isaksen, Bob Ellis, Steve Davi and Jim Skalski, successfully planned, developed and implemented plans, procedures and process improvements in program management, quality assurance, configuration management, system test and evaluation, outsourcing, contract management, needs, requirements and transition.

The Branch Team, consisting of 22 FAA professionals and 40 support contract consultants from ASQ, Atlantic Science & Technology, Bloodworth Integrated Technology, Client Network Sciences, Dimensions International, Multimax, Northrup Grumman Information Technology, RICOMM

Systems and Technology Management Associates, accepted the challenge and worked to achieve organizational maturity.

As part of the preparation, each program area developed detailed infrastructure documentation and procedures. The AOS-500 Division Quality Assurance Team assisted the Branch by conducting periodic compliance reviews and quality review assessments.

Additionally, the Branch team participated in several gap analysis reviews and formal appraisal readiness reviews. These reviews, were performed under the direction of AOS-20, Program Management Division. All of these efforts led to a successful formal appraisal.

Congratulations to AOS-550 for continuing to "set the standard" for excellence! 🚀

## Leaders Visit

*Continued from Page 1*

patented "adiabatic expansion nozzle," which extends the usefulness of fire extinguishing compounds by lowering their temperature and discharge pressure. This allows total flood-type halon replacements to be used in hand-held applications, and, in the instance of carbon dioxide, produces a low-pressure dry ice snow. They also visited the Federal Air Marshals and the Transportation Security Labs.

Mandell and Whitmer each said they were extremely impressed with the work that is being done here. They remarked how it is important that other people in Washington come here and see what we do, including members of Congress with responsi-

bility for our budget, as well as other key players in the DOT, FAA and other government agencies. Sturgell asked Harlan to convey a "thank you" to everyone who was involved in making his visit a success.

As the FAA's executive for Research and Acquisitions, Keegan has been here on a number of occasions. His recent all hands meeting, held at the Technical Center, was an opportunity to meet and speak with ARA employees and managers who work for the Technical Center. He spent about 90 minutes fielding questions on everything from the ATO to his views on diversity and the future of aviation. All who heard him speak seemed to come



*DOT Chief of Staff John Flarety gets an in-depth tour of some of the air traffic control labs.*

away with the same reaction; that ARA-1 is a very high-energy leader who has his fingers on the pulse of everything that is going on in the agency and the aviation industry. 🚀



## Employee Profile: Elimatier Ortiz

By Norris Hite, Jr.

When you approached the entrance to the William J. Hughes Technical Center from Sept. 15 to Oct. 15, there was a sign reminding all who entered that it was Hispanic Heritage month. The sign included an original piece of artwork that was recreated by a young man, Elimatier Ortiz, or "L" as his friends fondly call him, who works in the paint shop, ACX-044.

Now, one might ask, "Why is that a big deal? Isn't it the job of the paint shop to paint signs?" Yes, the paint shop paints signs, but it takes a special talent to create a mural. Ortiz was chosen because he is a painter in the artistic sense of the word. He has been an artist since as far back as he can remember. "I have been into art since I could pick-up a pencil," said the 26 year old. "Art is my passion. It is my life."

The Tech Center is lucky to have Ortiz. When he first came to the Center, his objective was to make money just like everyone else. It soon became more than a way for him to make money. His artistic abilities were quickly recognized and he became the Center's "artist-in-residence." Whenever murals or artistic signs need to be created or recreated, Ortiz gets the call. There are several pieces of artwork that he has had a hand in creating around the Center. One is the Tech Center logo that is on the fourth floor. Ortiz was charged with re-carving the logo to make it more pronounced and to repaint it. He suggested air brushing the logo instead of hand painting it. "Airbrushing gives it a more gradient effect. It blends in the colors much better and makes it livelier."

Also, on the fourth floor, right outside

of the Director's Suite, is an original artwork developed by Ortiz. It illustrates the evolution of flight and was created in metal pieces that were brought together to create a large mural. The work has been attracting a lot of positive attention. Many visitors to the fourth floor have commented on its attractiveness and uniqueness. "Dan Greis and I have been

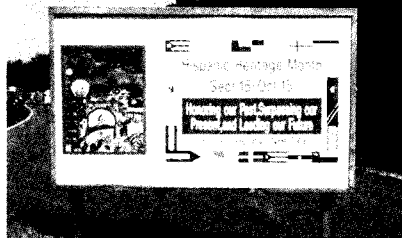
talking for years about creating a piece that could showcase my talents. He used to see me drawing all the time and was impressed by what he saw. He encouraged me and I worked to make it happen."

Ortiz, a native of Villalba, Puerto Rico, is a modest young man who loves to display his talent, but is not big on taking credit for it. He says he loves to create art and does it for art's sake. This is evident in the fact that Greis had to fight with him to sign his work.

While modest, Ortiz takes his passion very seriously. He is studying art education/art therapy at Cumberland County College in Vineland, NJ. He is currently completing his last semester at Cumberland and will graduate with honors in December. He is a member of Phi Theta Kappa Honor Society and plans to continue his education



Above: Ismael, Elimatier and Edimater. Left: The sign painted by "L."



at the Richard Stockton College in Pomona, NJ. Ortiz has accomplished this, while working full-time at the Tech Center.

Ortiz loves to create original work, but loves to share his talents more. After graduating from Stockton, he wants to teach art. He has already started by passing on his talent to his protégé – his five-year-old daughter, Jade Calen Ortiz, who says that she wants to be an artist like her father. Speaking of following in your father's footsteps, it is not an accident that Ortiz is here. His father, Ismael Ortiz, is the team lead in the carpenter shop and his younger brother, Edimater, is a cooperative education student in ACB-240.

The Millville High School graduate is looking forward to what is to come next. "My goal is to earn a Ph.D. in art and become Dr. Ortiz. I want to share my love of art with all who will listen and look. Art is the essence of everything. It unites all and rejects none. It is not something to just look at, it is something that people need to experience and appreciate." 2



## ATOP Achieves Government Acceptance

The Advanced Technologies and Oceanic Procedures (ATOP) system made a significant move towards the modernization of air traffic control over the oceans, due in no small part, to the tireless work of the ATOP Group, ACB-650. The group recently completed factory acceptance testing (FAT) for the system at the Lockheed Martin Transportation and Security Solutions development facility in Rockville, MD, the Oakland Air Route Traffic Control Center, and the William J. Hughes Technical Center. The successful completion of FAT was followed by the achievement of government acceptance of ATOP, which paves the way for ACB-650 to begin conducting system testing.

ATOP will replace existing oceanic air traffic control systems and procedures with a single integrated system, and modernize facilities responsible for managing more than 24 million square miles of airspace over the Atlantic, Pacific, and Arctic oceans. The program is one of ARA's first-tier, top-priority programs and is tied to agency goals including: the ARA Performance Plan, Goal 2: Capacity and Efficiency; the Operational Evolution Plan, ER-6: Reduce Oceanic Separation; and NAS Architecture, Phase 2, 2003-2007.

Oceanic air traffic control (ATC) is different from domestic ATC largely because there is no radar tracking of aircraft and no direct radio communication. Position reports based on onboard aircraft navigational systems are radioed to the controller. Due to the uncertainty in position report reliability, planned overseas flight tracks must provide greater separation margins to ensure safe flight. As a result, oceanic users are rarely able to

obtain maximum fuel efficiency, minimum travel times, or access to preferred flight paths.

The new automation system integrates flight data processing, detects conflicts between aircraft, and provides data link and surveillance capabilities. These new capabilities set the stage for reducing aircraft separation from 100 nautical miles to 30 and will enable the flexibility and predictability required for additional fuel savings and cargo revenue. Oceanic revenues are vital to industry recovery. Although only four percent of total US Air Carrier operations, oceanic flights provide 49 percent of the international cargo revenue and 20 percent of the passenger revenue. Oceanic airspace users include general aviation (GA), military, charter, and major commercial airlines (US and abroad).

The next phase of testing is system test, which will be conducted at the Technical Center's ATOP laboratory. This lab is the premier test facility for the ATOP system and is fully configurable to support any of the three oceanic sites - Oakland, New York and Anchorage. The Technical Center's ATOP configuration consists of a full complement of equipment that includes two fully independent but synchronized channels. Each channel consists of three server pairs that



*Above - ATOP Team Group Photo (ACB-650, ACB-730, AOS-340, LMTSS)*

*Left: John McCarron, ATOP Product Lead, AUA-600 & Angel Hassan-Miller, ATOP Group Manager, ACB-650*

provide automated redundancy for the following services respectively: flight data processing, external interface processing, and surveillance and system analysis recording processing. The ATOP laboratory also has a full suite of user-related positions, including 16 controller workstations, four monitor and control positions, two supervisory positions, two flight data repair positions and four pilot positions (for simulation purposes). In the same manner as at the sites, each of these user positions can be switched to monitor either channel A or channel B via the keyboard video monitor Switch. In addition to the servers and user positions, the ATOP system also has a set of display and recording playback servers (DRPS) that record all of the control position displays including the controller interactions. The DRPS system is instrumental as a training aid, in software debugging, and in incident investigation activities.

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## ATOP Accepted

*Continued from Page 4*

As the FAA strived to modernize the oceanic services to keep pace with the oceanic air traffic demand, it was necessary to switch from the current use of paper flight strips to electronic flight strips on the ATOP system.

Without the fall back of paper strips, the FAA had to devise a method to be able to maintain the ATOP system without disrupting the automation services that the system itself provided. In order to address this requirement, the ATOP system has two fully independent channels and a redundant pair of synchronization servers that are the link between the two channels. The synchronization servers' primary job is to replicate all the pertinent data from the active to the backup channel. As an added bonus in a laboratory environment, this capability provides additional test

resource configurations and allows the FAA to better utilize the laboratories that are typically scheduled 24 hours a day.

In addition to the site configurations, the ATOP lab



*Above: Lisa Cotterell and Sam Levine at the ATOP Controller Workstation*

*Left: ATOP Test Team in the ATOP lab*

at the Technical Center has numerous simulators, a multitude of switches and connections to both onsite test facilities and worldwide test facilities. When combined, all of this spe-

cialized lab equipment makes it possible to test all of the facets of the ATOP system prior to site deployment with unlimited flexibility. This flexibility helps the staff ensure that only the most mature and fully tested products are deployed to the sites for operational use. ●

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## Display System Replacement Engineering Marvel

Upon analysis of the Display System Replacement (DSR) Console by the United States Architectural and Transportation Barriers Compliance Board, it was determined that many console controls do not fall within the required reach ranges as specified in the Uniform Federal Accessibility Standards (UFAS), paragraph 4.2, Space Allowance and Reach Ranges. The DSR Program Office requested that the AOS-350 engineering team design and develop a solution to this non-compliance issue.

After reviewing the requirements as determined by AHR, ASU, ARU, and AOS organizations, the AOS-350 engineers at the William J. Hughes Technical Center in Pomona, NJ developed, in-house, a solution that meets UFAS Reach Ranges Standards. The solution uses a hand-held infrared remote control device that adjusts those controls outside the UFAS reach ranges.

The modification plan began a multitude of design iterations. The solution needed to ensure that the console modification was transparent to users to avoid confusion.

Numerous challenges were encountered for the design solution such as locating a vendor that could build the remote control unit to meet specifications. This device was the focal point of the entire project. The team performed necessary machine work and developed silicon molds to cast specialized components, which were necessary to satisfy unique hardware requirements. Custom built motorized electronic components were also needed. One of many challenges was to identify vendors capable of providing such custom parts. New circuit



*Above: The AOS-350 team members who contributed to this outstanding effort were **Craig Bates**, **Tuyen Ngo**, and **Ackermann**. Left: **DSR remote***

card assemblies and interface cables were designed and produced. Limited space for required electro-mechanical devices added to the complexity of the project.


This outstanding engineering team met every challenge. One solution to the aforementioned challenges included building and installing a light pipe receptor/ transmitter not only to accept signals from the hand-held device but also to provide visual signals to the controller.

Another innovative resolution used miniature universal joints to remedy space constraints. These inventive solutions and others were utilized without changing the look and feel of the console or the interface cabling.



The proof of concept prototype was tested at the Technical Center during May 2003 and field tested and installed in Jacksonville Air Route Traffic Control Center (ARTCC) to demonstrate the features at an operational facility. The installation was an overwhelming success. The initial user of the remote device, a disabled ATC specialist, was pleased to no longer be dependent on coworkers to access those controls beyond his reach.

Additional kits are presently being built to retrofit ARTCC consoles throughout the United States.

The AOS-350 DSR/URET ISMT team, led by **Thomas Ackermann**, performed an outstanding job. Only in-house resources were used with no additional cost to the program. The team performed this task in an exemplary manner creating a significant cost savings for the FAA. 





## Aviation Enrichment Day Huge Success

By Ginger Cairnes

"Come fly with us," was the key phrase for Aviation Enrichment Day held on August 20. The program was created to foster and encourage the growth of aviation with young people while giving employees the chance to demonstrate to their families what actually goes on at the William J. Hughes Technical Center.

To help make the occasion memorable, the playground and atrium were decorated with a myriad of kites to encourage future "pilots." Along with the decorations were a myriad of activities and workshops, which were produced and led by **Ginger Cairnes, Mary Lou Dordan, Carleen Genna-Stoltzfus, Barbara Harris-Para** and **Lana Haug**.

One such activity was the "testing-pad," which is where pint-sized designers practiced the effects of variables on aircraft, and put gliders and Wright Flyers to the test. Near the "testing-pad," children sat quietly as **Sonia Berberna, Erica Haug, Sarah Latyn** and **Stacy Tomasello** painted aircraft, spaceships, and rockets, on their faces. Close by, portrait artist, **Ken Stroud**, drew likenesses of young and old.

Employees and their families were also able to tour the Airway Facilities Tower Integration Laboratory, National Airport Pavement Test Facility, the Coast Guard Air Station, and the Fire Station featuring the High Performance Rescue Vehicle. **Bill Vaughan, Satish Agrawal, Lt. Rodney Rios, John Linney** and their staff provided the presentations at

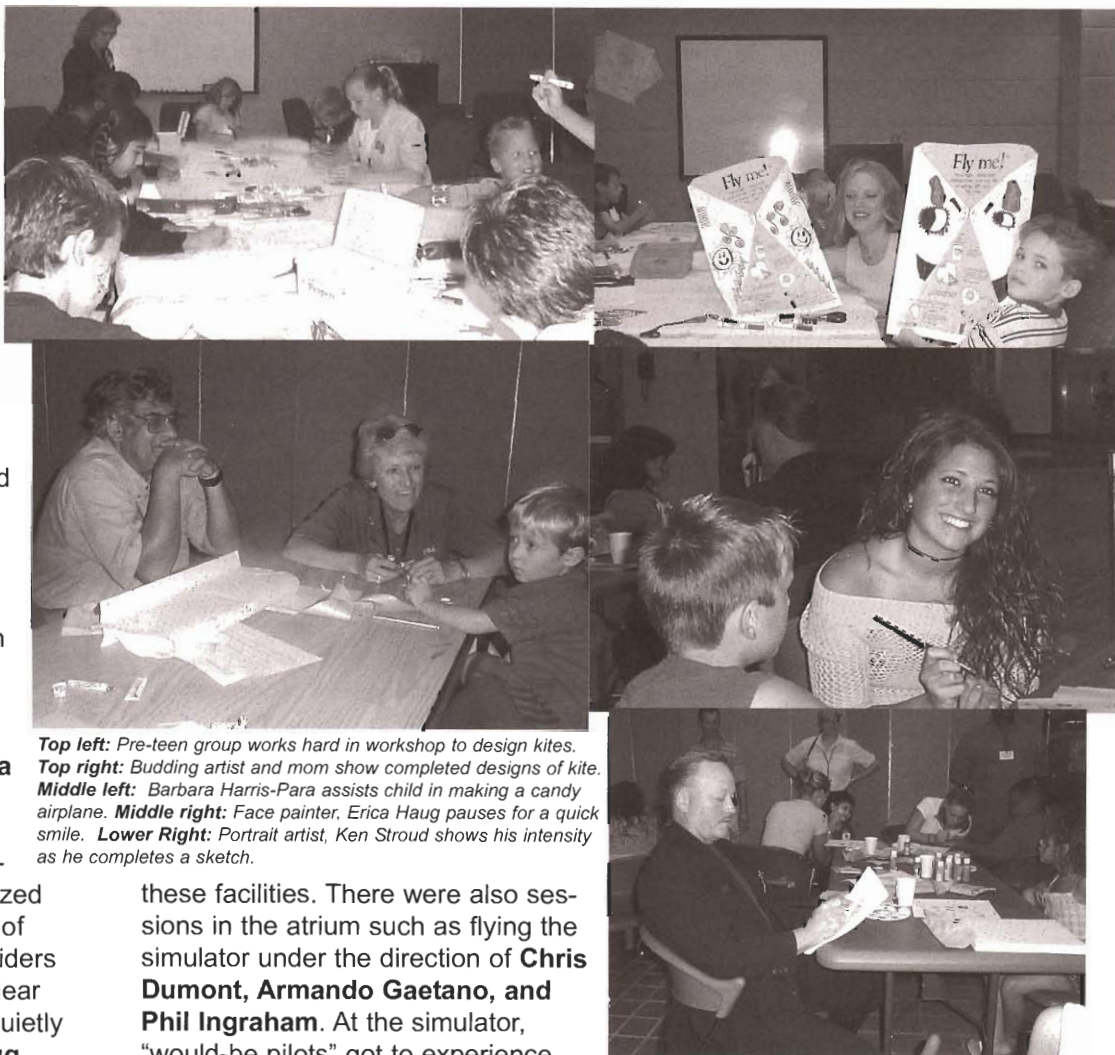
these facilities. There were also sessions in the atrium such as flying the simulator under the direction of **Chris Dumont, Armando Gaetano, and Phil Ingraham**. At the simulator, "would-be pilots" got to experience how it feels to be in the cock-pit.

An outside barbeque, complete with disc jockeys **Pete Saraceni** and **Jesse Goldy**, proved a pleasant break from the morning hoopla. Following the lunch break, the activities and tours resumed. By 4:00 pm, everyone was ready to call it a day.

It soon became clear that the entire Tech Center was anxious to participate in the program. Less than three days after registration started, almost all workshops and sign-up activities were filled, prompting the need to add

more tours. More than 450 participants proved that this was something employees wanted and that such an event, focusing on aviation enrichment, could be successful. Based on feedback, plans are already under way to hold this event next year and to offer even more activities.

The event's planners would like to thank all who helped pull it together. Unfortunately, there is not enough space to list everyone. However, no matter what size of a contribution was made, it took everyone to make the day an outstanding success.



*Top left: Pre-teen group works hard in workshop to design kites. Top right: Budding artist and mom show completed designs of kite. Middle left: Barbara Harris-Para assists child in making a candy airplane. Middle right: Face painter, Erica Haug pauses for a quick smile. Lower Right: Portrait artist, Ken Stroud shows his intensity as he completes a sketch.*

## 45th Anniversary Aviation's Future Began Here

By Stan Ciurczak

*This is the last article in the 45th anniversary series. It further discusses accomplishments of the Technical Center.*

A major milestone in the history of the National Airspace System was reached at the William J. Hughes Technical Center when, after installation and extensive testing, the FAA accepted the Display Channel Complex Rehost (DCCR) on September 24, 1996.

DCCR was an interim replacement for the Display Channel Complex (DCC), a 1960-era IBM 9020E computer that had been installed in five out of 20 Air Route Traffic Control Centers (ARTCC). Display channels were experiencing numerous failures, which caused delays throughout the air traffic control system, and DCCR was produced in response to this problem. The goal was to improve display channel equipment reliability, maintainability and availability, while providing additional display channel capacity. DCCR deployment permitted controllers to continue with present functionality and enjoy the benefits of new hardware with minimal impact on their day-to-day duties.

DCCR was re-initiated in September 1994, at the recommendation of the Advanced Automation System Recovery Team. This team was formed to evaluate the air traffic control system, after termination of the Advanced Automation System contract.

It was determined that the Proof-of-Concept DCCR should be negotiated as part of an already existing contract, in order to efficiently start the program as soon as possible. Proposals were submitted and

reviewed, and a series of "fact-finding" sessions took place to audit the technical and cost proposals. Hardware used in previous programs was made part of the DCCR program, which cut the contractor's costs and schedules even further. Final negotiations took place in March 1995, and then a definitive contract was negotiated between the FAA and the contractor.

The DCC equipment at five ARTCC had experienced failures in the months prior to the development of the Proof-of-Concept contract, the most recent at the Chicago ARTCC, which handles high volumes of air traffic. This prompted the decision to begin the Production and Deployment phase of DCCR in July 1995. All required paperwork was filed in less than a month, and a letter of agreement was issued for costs not to exceed \$10 million until the contract could be finalized. This allowed the contractor to begin work on DCCR production and deployment immediately.

DCCR was accepted by the FAA following completion of system acceptance testing at the Technical Center and at the Chicago ARTCC. Operational Test and Evaluation was completed here on October 5, 1996, and shakedown testing began three days later.

The Technical Center developed Threat Image Projection technology that would run a checkpoint x-ray on EDS technology to monitor screener performance on-line.

The Technical Center also developed a building blast analysis program, BLAST-FX, which is used by airports throughout the world to determine safe standoff distances for construction of new airports and terminals. The program also is used by a number of other

government agencies. Along with industry, the Center also developed Radio Frequency Identification tags for tracking bags. The tags currently are being used, and tested, in various airports around the world for multiple air carriers.

Working with industry, the Technical Center's Aviation-Hardening Program developed LD3 hardened luggage containers that could contain a significant blast, and operationally tested these containers with the airline industry. The program also developed a risk vulnerability model to assess attacks from Manportable surface-to-air missiles and developed an aviation blast analysis model to determine the minimum mass of different explosive types that can cause catastrophic damage. Data from this model and an actual field test were used to develop the certification requirements for the Explosives Detection System.

The Technical Center also worked on the Los Angeles Basin Study of the FAA's National Airspace Redesign initiative in the Operational Evolution Plan. This was done in order to redesign and optimize the local airspace to increase efficiency and reduce delays for flights in and out of the Los Angeles terminal area.

President George W. Bush created a new cabinet-level Department of Homeland Security on March 1, 2003, which transferred TSA and the Coast Guard from the Department of Transportation to Homeland Security. The Technical Center's transportation security lab (formerly the FAA's aviation security research and development laboratory) now supports the Homeland Security department's Border and Transportation Security and Science and Technology organizations. 2



## Substitute Teaching/Tutoring Program

By Donna Young

Two years ago, the FAA William J. Hughes Technical Center forged an agreement with Atlantic City High School to have its technical and engineering professionals share their expertise and knowledge as substitute teachers and tutors. These activities directly support aviation education and aeronautical science. The Atlantic City Press has praised the program, stating, "What an excellent idea. It's such a good and obvious idea that we find ourselves wondering why no one thought of it earlier."

A new school year has begun, and once again several Tech Center employees will serve as substitutes and tutors in math, science and computer courses. This year the program is expanding to another local school, Pleasantville High School. The agreement with Pleasantville was entered into this past summer. Participating Center employees will now have the opportunity to support both Atlantic City and Pleasantville high schools.

Eight Center employees **Stacey Hamilton, Bob Filipczak, Michele Hovan, Peter Sparacino, Rosanne Weiss, James White, Terry Lewis** and **Robert McGuire**, certified by

Atlantic County as substitute teachers, are currently involved with the program. In addition, six more Center employees, **Kristina Burch, Norman Jones, Gina Kugel, Alanna Randazzo, Soncere Whitecloud-Woodford, Ryan King** and **Richard P. Smith**, are in the process of becoming certified. They soon will begin a "shadowing" process in the classrooms where they will be substitute teaching. All participants will remain on the FAA rolls while they substitute or tutor at the high schools. Participants are contacted directly by the school to substitute, and, if available, will fill in. In the past, substitute assignments haven't involved more than two or three days a month. The tutoring program will only involve a few hours per week.

Having Tech Center employees in the classroom gives students an opportunity to relate their classroom knowledge to real-world experiences. The students discuss mathematical principles with employees who actually use these concepts in their everyday work, and they perform lab experiments with researchers whose job it is to conduct critical experiments for the FAA.

The students certainly benefit from having "real-life experts" in their classrooms and the substitute teachers are excited about the program as well. They continually mention their "personal sense of accomplishment" through their individual tutoring and teaching. According to **Peter Sparacino**, one of the Tech Center substitutes, "Math and Science expertise are areas of great need in not only Atlantic City High School, but in all our schools. This program has provided a great opportunity to many of us who have been involved in engineering and the sciences to 'give back.' It has also allowed the Technical Center to be more involved as a full partner in our local community."

We look forward to greater participation from other employees and the possible expansion of this technology-sharing program with additional educational institutions. If you are interested in sharing some of your technical expertise in an educational setting with young and energetic high school students, please call **Donna Young** at (609) 485-6754. You may find the personal intangible benefits will be most rewarding to you!



## Rotorcraft Personnel Visit Technical Center

By Ginger Cairnes

In late August, **Kimberly Smith**, newly selected assistant manager of the FAA Rotorcraft Directorate and **Ed Cuevas**, the Research and Development coordinator, visited the William J. Hughes Technical Center to attend briefings on the Rotorcraft Structural Integrity and Safety.

**Dy Le**, Materials and Structures Branch, presented an overview on rotorcraft structures research and development. **Ken Knopp** (AAR-460) provided an overview of the Vertical Flight program. The visitors also toured

some research and development facilities, including the Full-Scale Fire Test, Crashworthiness, and the National Airport Pavement Test Facility.

Later, Smith, Cuevas and **Xiaogung Lee** toured the Weather and Radar Processors Lab, the Integrated Terminal Weather System Lab, the Wide Area Augmentation System/Low Area Augmentation System Lab, and Airway Facilities Tower Integration Lab.

At the conclusion of the day, Smith was impressed how the research and devel-

opment and the Center facilities directly address current and near-term aviation safety needs and requirements. As the sponsor of the research and development work being conducted at the Center, she was extremely impressed and strongly supports the Center's research and development programs, goals and initiatives. She also stated that one of the goals of the Rotorcraft Directorate is to bring the Rotorcraft research and development to the next level to address the Directorate regulatory requirements and research and development needs.



## Organizational Profile:

# Office of Technology, Acquisition & Operations

By Stan Ciurczak

The pressure is on; you are working on a high-visibility, short turnaround project. All the pieces have to come together on time and within your budget. You need to schedule multiple meetings in conference rooms. You need the latest budget information relating to your project and you need some publicity photos taken. You need to travel to Washington on the shuttle to coordinate your efforts with your program office, and you may need some IT support when you return. Who are you going to call? Not Ghostbusters, call "OTA!"

Last year the Office of Technology, Acquisition & Operations (OTA) became a reality at the FAA William J. Hughes Technical Center. Ronald J. Esposito was selected as the Managing Director for OTA (ACX-1). Once key manager positions were filled, a plan was created to ensure that OTA achieves its mission. Today OTA is working hard – and succeeding – at becoming the 'provider of choice' to many different customers for a wide range of services.

OTA combines all Technical Center support services, which include enterprise security, travel and meeting management, the service liaison function, information technology, financial management, facilities services and engineering, advanced imaging and acquisitions, materiel and grants. Human Resource Management (ACT-10) also is considered to be part of the ACX family of services, although ACT-10 is straightlined to FAA Headquarters.

A recent event illustrates the important role of a central support organization to the Center. As Anne Harlan wrote in a recent edition of the Technical Center Highlights, "All of us owe a special thank-you to everyone who worked so hard on

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**"All of us owe a special thank-you to everyone who worked so hard on the year end closeout."**

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**-- Anne Harlan**

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the year end closeout. With the books closing early this year, it was especially critical that everything be in and processed quickly. Many people stayed very late to make sure everything was in the system, so a special thank-you to our folks in accounting, budget, contracts, facilities services, information technology, service liaison and other business analysts. In case you were wondering how we closed out the year, the first thing of interest is that the total obligations for all organizations during FY 2003 exceeded \$650 million. Keep in mind that not all organizations located at the Tech Center use our budget and contracting offices, so this is only for those organizations that receive, track and spend money through our offices here. We were able to fund some significant infrastructure repair, maintenance, safety related items and security upgrades that impact everyone at the Center. A few of these items include road and parking lot repairs, perimeter lighting, equipment installation to upgrade the fire alarm system, upgrading of internet firewalls, evacuation signage, duct cleaning, emergency generator repair, chiller inspection, and Central Utility Plant transformer replacement. Those may not sound very exciting, but



**Ronald J. Esposito**

Prior to being named the managing director of the Office of Operations, Technology and Acquisitions, Ronald J. Esposito was the Technical Center's Chief of Staff for six years. Prior to that he held the positions of Deputy Service Director of the Resource Management Service, Manager of the Financial Services Division, Manager of the Contracts Branch and Manager of the Information Resources Branch. He also was a Strategic Planning Officer and a Budget Analyst.

*Continued on Page 11*





## ACX Profile

Continued from Page 10

without them, we wouldn't be open for business very long."

OTA has introduced the use of service level agreements (SLA) over the past year as a tool to assess their performance and to focus on customer relations. An SLA is an agreement between OTA and its customers that provides a predictable and expectable level of service, while at the same time quantifying the minimum acceptable level of service to the customer. The use of SLA's sets expectations for service delivery, defines customer and

service provider responsibilities, establishes service descriptions and standards, sets forth a method for tracking and reporting service delivery, establishes a vehicle for providing periodic reviews to the customer on service delivery and provides a means of continuous process improvement. SLA's have been signed with a number of organizations including the Center's Innovations and Solutions organization, the Terminal Business Service, the Federal Air Marshals and the Transportation Security Lab. AOS and other organizations also are

expected to sign SLA's soon. OTA also has a written plan for improving customer service and creating excellent products. "The integrated services provided by OTA will be the best value for all customers," said Esposito. OTA's plan fully supports the ACT and ARA strategic plans and the new FAA flight plan, and is reflected in the Technical Center's Balanced Scorecard, a tool for making sure that ACT does everything it can to help shape aviation's future. With the support of OTA, the Center will achieve its goals and objectives. ●

### 100 YEARS OF FLIGHT

An Aviation program for girls in grades 7-12.

Sponsored by the Girl Scouts of the South Jersey Pines and the FAA William J. Hughes Technical Center.

Date: November 22, 2003

Time: 9:00 a.m. to 4:00 p.m.

Cost: \$22.00 per girl

Consider a career in aviation through exploration of 100 years of flight at Richard Stockton College of New Jersey. Workshops will be conducted by women in the field of aviation. The program will include a special Franklin Institute "Flight" presentation exploring inventions from Leonardo DaVinci, the Hindenburg, Bernoulli, and the Wright Brothers. For more information, call Barbara McLaughlin at 1-800-582-7692 Extension 34 (Girl Scout Office); or Mary Lou Dordan at 609-485-6493 (FAA Tech Center Aviation Education Office).

**Complete and mail the registration form below in order to attend this exciting program.**

✂ cut along this line

#### "100 Years of Flight"

Send registration to GSSJP, P.O. Box 948, Newfield, NJ 08344

Name \_\_\_\_\_

Phone: \_\_\_\_\_ Grade: \_\_\_\_\_

Address: \_\_\_\_\_

Enclosed is a check for \$22.00 made payable to GSSJP. Please bring a bag lunch, since lunch is not included.

A permission slip will be sent to each student with confirmation for this event.

## Airfest at Cape May

By Mary Lou Dordan

If you like aviation history, there is a place in New Jersey you need to visit. The Naval Air Station Wildwood (NASW) Aviation Museum, adjacent to the Cape May Airport, is a treasure trove of aviation history and hands-on activities for all ages. In addition to aircraft, such as the T-33, MIG-15, OH-6 and UH-1 Huey helicopters, A-4 Skyhawk, TBM Avenger, Boeing-Stearman PT-17, T-28 Trojan, L-19 Birdog, and Lockheed T-33 Shooting Star, the NASW Aviation Museum also boasts a large collection of aviation artifacts, military memorabilia, aircraft engines, and more. All these resources are housed in or near the 92,000 square foot, all-wooden Hangar #1 that is an exhibit in itself! Hangar #1 was added to the National Register of Historic Places in September 1997.

It is not a small wonder so many people attend the Annual Fly-In Pancake Breakfast and Airfest held each year in Hangar #1. Upon entering the hangar, they are surrounded with the music, the aircraft, and the aura of an era that will maintain a special place in history until the end of time.

Mother Nature shrouded the airport with a heavy fog during this year's event, but that did not stop the thousands of local residents and shore visitors who enjoyed the melodies of the "Big Bands" of the 1940's wafting through the hangar's PA system while they learned about aviation history and visited the special exhibits and vendors participating in the event. The FAA William J. Hughes Technical Center was well represented in Hangar #1 via the Aviation Education Outreach Program exhibit and a special visit by AIR BEAR (alias Rosanne Weiss).

One of the highlights of the day was a series of touch-and-go landings made by a Caribou aircraft similar to the one on loan from Pen Turbo to the museum for a static display. This manufacturer is currently converting the old

piston engines on the Caribou to turbine powerplants. A little-known fact is that the Caribou predated the

major helicopter commitment to Vietnam by five months. The Caribou flew up and down the length of Vietnam going into airstrips normally limited to much smaller aircraft such as the O-1 or U-6 Beaver. The Caribou filled a serious gap in the United States inventory. Its short field characteristics, payload, and light "footprint" made it an ideal aircraft in the counter-insurgency environment. Many pilots consider the Caribou to be the most significant aircraft in Army Aviation history.

The NASW Foundation is in the process of developing a wide range of educational resources at Hangar #1. The NASW was recently selected as a member of the Cape May County Distance Learning Consortium. Their Distance Learning program uses compressed video and ISDN technology, which enables NASW museum educators to interact



Top: Helicopters available for hands-on display. Right: Mary Lou Dordan talks about aviation with visitors to the Tech Center exhibit. Left: Caribou on display.

with students at alternate sites via interactive video/teleconferencing. Students can take "virtual" field trips to NASW as well as actual ones. In addition to the development of a video conferencing program, the museum is also installing an aviation library, which will be incorporated into the Cape May County Library system.

This past spring, Museum Director Dr. Joseph E. Salvatore, dedicated the museum's newest exhibit, "Vietnam Remembered." The museum's hangar manager and Vietnam veteran, Tom Collins, organized the event. Collins, who was a gunner on a Huey helicopter during the war, designed this special room with photos from the war, the Vietnam Wall in Washington, DC, and his own memorabilia that included weapons, badges, food rations, etc.

For more information on the museum, visit their website at [www.usnasw.org](http://www.usnasw.org) or call 609-886-8787.





## New Center of Excellence Created

By Holly Baker

The FAA has created a new Air Transportation Center of Excellence for Aircraft Noise and Aviation Emissions Mitigation. The Center of Excellence is a world-class partnership of academia, industry and government created to identify solutions for existing and anticipated aircraft noise and emissions-related problems. The center will conduct basic research and engineering development and will develop prototype solutions.

"Bringing the formidable resources of academia and industry together, the center is a force to make significant contributions in noise and emissions research," said FAA Administrator Marion Blakey.

The partnership will be led by the Massachusetts Institute of Technology (MIT). The other members from academia are Boise State University; Florida International University; Pennsylvania State University; Purdue University; Stanford University; University of Central Florida and University of Missouri – Rolla.

The Center research and development efforts will concentrate on a broad spectrum of noise and emissions mitigation issues, including: socio-economic effects, noise abate-

ment flight procedures, compatible land-use management, airport operational controls, and atmospheric and health effects.

The 18 industry partners in the new center are:  
American Institute of Aeronautics and Astronautics  
Aerodyne Research, Inc.  
Bell Helicopter Textron

- Boeing
- Delta Air Lines
- GE Aircraft Engines
- Gulfstream Aerospace
- Logistics Management Institute
- Metron Aviation
- Metropolitan Washington
- Airports Authority
- Pratt & Whitney
- Raisbeck Engineering
- Rannoch Corp.
- Regional Airport Authority of Louisville and Jefferson County
- Rolls-Royce
- Sikorsky Aircraft
- Wyle Laboratories
- United Parcel Service

The Center is expected to begin operation this month. The FAA will share in the cost, its share spanning three to 10 years and totaling \$900,000 to \$1.75 million in the first year, with a minimum of \$800,000 per year for the next two years.

Congress authorized Air Transportation Centers of Excellence under the Federal Aviation Administration Research, Engineering and Development Authorization Act of 1990. This broad legislation enables the FAA to work with universities and their industry partners to conduct research in airspace and airport planning and design, environment and aviation safety, and to engage in other activities to ensure a safe and efficient air transportation system.

The FAA has established five other Centers of Excellence, focusing on computational modeling of aircraft structures, airport pavement technology, operations research, airworthiness assurance and general aviation.

Carl Burleson, director of the FAA's Office of Environment and Energy, is the sponsor of the new center. Dr. Lourdes Maurice, chief scientist and technical advisor in that office, is technical program manager for the center. Dr. Patricia Watts is the Centers of Excellence program director. She manages this valuable agency program under the direction of the Office of Aviation Research.

For more information about the FAA Centers of Excellence program, visit [www.coe.faa.gov](http://www.coe.faa.gov).

## FAA Shuttle Reaches Milestone

The FAA Shuttle reached a significant milestone in October. The shuttle, which transports employees and contractors back and forth to Washington, recorded its 25,000th passenger in August 2003.

The lucky traveler was Bobbi Catterton, an administrative officer with ARA-3 in Washington.



*Bobbi Catterton arriving as the Shuttle's 25,000 passenger. She is greeted by Dr. Anne Harlan and Bobby Nichols.*

Continued on Page 15

## The Space Race-Two Decades Later

By Barbara Harris-Para

As the victory from World War II began to fade, the tension between former allies, the U.S. and the U.S.S.R. were beginning to increase. The Soviets had created an Eastern Block of countries that were virtually locked behind what Winston Churchill characterized as the "Iron Curtain." This began a reversal of the air capability in Europe, which began the "Cold War," a period that would last more than 50 years.

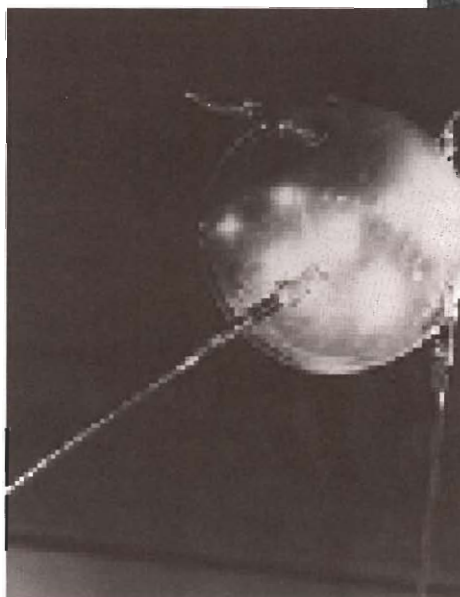
The Cold War was accompanied by more conflict. The Korean War was raging and for the first time, "jet aircraft" were being used to fight the war with radar, anti-aircraft guns and automatic weapons. Ballistic rockets were not quite accurate, but soon rocket-powered missiles with sophisticated (for the times) guidance systems were coming to the forefront. Aviation technology was advancing at a furious pace. There was supersonic flight three times faster than the speed of sound (Mach 3), construction of aircraft wings was improved and, in the late fifties, rockets were launched into space.

On October 4, 1957, the Soviets launched **Sputnik**. A month later, a living dog was launched. These stunning feats seemed to take the world by surprise. In response, the U.S. attempted to get a rocket, the **Vanguard**, into space in December 1957. The failure of Vanguard caused the U.S. to work harder and a successful flight occurred six weeks later. The Space Race was had officially begun.

The U.S. saw that competing was not sufficient. This was a race that the country could not afford to lose,

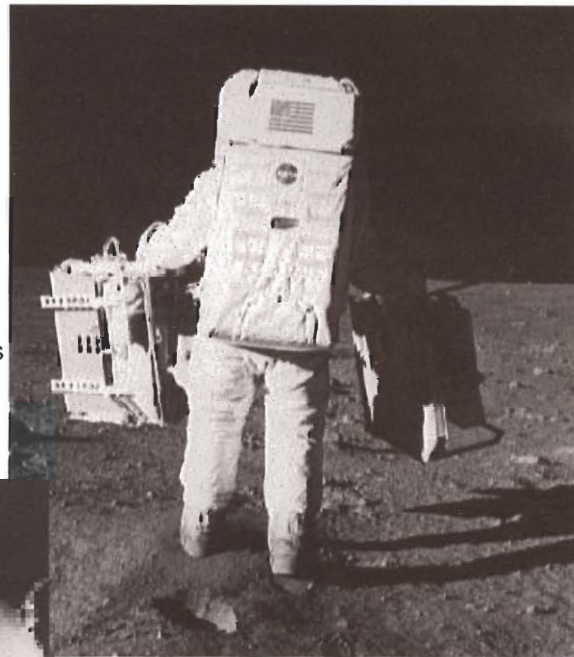
and the feeling was that the Soviets were already a step ahead. Thus, President Eisenhower signed the National Aeronautics & Space Act in 1958, forming the National Aeronautics & Space Administration (**NASA**).

A Redstone ballistic launch vehicle, developed by the Army, was coupled to **Explorer 1**, which was launched January 31, 1958. On May 5, 1961, Alan Shepard became the first man in space,



just four years after **Sputnik**. President Kennedy, believing a manned flight to the moon was possible, requested that Congress provide funds to meet this daring goal.

Working toward Kennedy's goal, NASA created the **Gemini** program, which was the second phase of the "Man on the Moon" mission. This project proved that men could stay in orbit for more than two weeks, working on space problems. NASA took a giant step forward with **Saturn**



**Above:** Astronaut Edwin Aldrin prepares to deploy EASEP on surface of moon. **Left:** The Sputnik satellite

**Apollo.** This allowed three men to work, live in space, and return to earth after a period of time. Navigation, propulsion and communications were the cornerstones of these flights. A combined effort between large corporations and NASA developed the necessary space vehicle to take man to the moon and return. Over 20,000 subcontractors and suppliers worked on this project. More than 350,000 people participated in getting man to the moon.

Next came the **Saturn V**, which was the largest rocket ever built, almost 200 times the weight of the V-2 and four times as powerful as a Russian rocket. Saturn V had three stages. The first was the most powerful, moving the rocket 6,000 mph. The second stage developed more than one million pounds of thrust, burning liquid hydrogen. Stage three, unlike the first two, had only one engine producing 230,000 pound of thrust, moving Apollo at a

*Continued on Page 15*





## Food for Thought

By Natalie Reid

Banners on the walls, showcases in the atrium, and signs along the main entrance to the Technical Center have long been a part of the Center's culture. However, table tents on the cafeteria tables displaying current information are a new addition.

The purpose of these tents, which have been in place for the last several weeks, is to communicate to government and contractor employees and Center visitor's information relating to FAA projects, people, events, organi-

zational strategies, etc. As the FAA and the Technical Center seek to become measurement oriented and strategy focused, it is important that every member of the Technical Center community be aware of the organizational mission and vision (what is it we do and where are we headed in the future) as well as the strategies, goals and objectives that will take us there.

Besides the obvious benefit of factual information sharing, knowledge of this kind can help an organization foster:

Insight into the organization's roles and responsibilities

A better understanding of what is being measured and reported to management

A better understanding of the decisions of senior management

A celebration of our successes

So take a minute to read and learn. If you have ideas for information that can be shared in this way or questions you would like to see addressed, please contact Norris Hite. ☺

## The Space Race

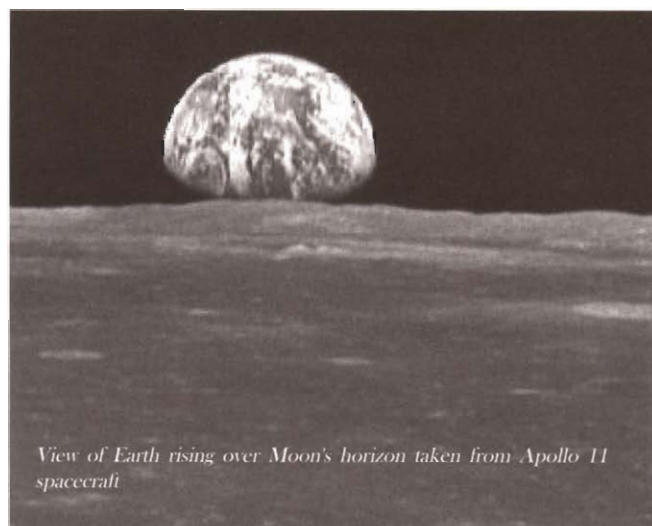
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speed of 24,900 mph. The Lunar Module was considered the ugly duckling of the entire Apollo vehicle and rode in the third stage of the rocket. The Lunar Module would never return to earth, but would be used only for the ascent and descent stages, each having their own rockets to the moon. The service module was used to propel and maneuver the command module in its flight to and from the moon. The command module was for the reentry to earth.

**Apollo 7** lifted off on Oct. 11, 1968; **Apollo 8** on Dec. 21, 1968; and **Apollo 9**, the first manned mission involving the lunar module, launched March 3, 1969. **Apollo 10**, another perfect launch, went up May 18, 1969. On July 20, 1969, Neil Armstrong blasted off into history with **Apollo 11**, the first manned flight to reach the moon's surface, allowing Armstrong to become the first person to walk on the moon. **Apollo 12**, second lunar landing, continued NASA's success. However, **Apollo 13** was to be a test of courage, human endurance, and extreme cooperative effort. It had problems also from the

outset and never made a lunar landing. **Apollo 14** blasted off on Jan. 31, 1971 on a lunar landing mission. **Apollo 15** left for the moon on July 26, 1971, with a new exploratory device – the lunar vehicle, the astronauts' greater ability to explore the moon's surface. The two final Apollo missions, 16 and 17, ended the year 1972, with successful lunar travel.

From all of these explorations, the U.S. was able to develop the Space Shuttle program in 1981. Columbia, the first shuttle, revolutionized space travel. It allowed the astronauts the ability to land from space travel just as a plane would travel from a domestic site. The shuttle program allowed NASA to create a safe, reliable, and reusable vehicle for space exploration. While the Soviet Block is not in existence any longer, the U.S. remains the leader in Space Travel. The International Space station is a



View of Earth rising over Moon's horizon taken from Apollo 11 spacecraft

combined effort between nations, with all sharing in the cost.

There are many more frontiers in space to be explored with galaxies to study that are beyond our capability at this point. Space research in gravity and micro gravity, humans living extended lives in space, as well as studying the earth from above, are all now feasible. The next decades will provide many answers, while also creating a host of new questions. ☺

## Obituaries

**FANTA, JR., FRANK JOSEPH**, 81 - passed away in Florida on August 15, 2003. He resided in Northfield for 40 years before moving to Florida five years ago.

Fanta served in the Navy during World War II. He worked 37 years for the government at the Naval Research Laboratory in Washington, DC and NAFEC in Pomona, NJ.

He was a member of the Veterans of Foreign War (VFW), Disabled American Veterans (DAV), a Post Commander of the American Legion, and National Association of Retired Federal Employees (NARFE).

He is survived by his wife of 60 years, Gladys; their son Gary of Grand Island, FL; their twin daughters Patrice (Patty) A. Masonheimer of Grand Island, FL, and Nancy L. Tobias of Northfield; and 10 grandchildren.

**SPRIGG, PEARL E**, 88 - of Absecon, passed away on September 4, 2003 at Atlantic City Medical Center-Mainland Division, Galloway Township. She was born in Burlington, NJ and was an area resident for many years. Sprigg worked for NAFEC for many years. She was a life deaconess at the First Baptist Church of Atlantic City in Pleasantville. She is survived by her husband, John P. Sprigg of Absecon; her son, Russell Repp and his wife, Gloria of Greenville, SC; and three grandchildren, Jon of

Seattle, WA, Andrew of Hawaii, and Janelle of Christianburg, VA.

**FELIX F. HIERBAUM, JR.**, 83 - of Melbourne, FL, formerly of Margate, passed away Friday, September 19, 2003 at Holmes Regional Medical Center in Melbourne.

He was born in Neumarkt, Burgunland, Austria and immigrated to the United States through Ellis Island in 1926 with his mother and two brothers. After leaving his four years of service as a Radioman 1st Class in the U.S. Navy with an honorable discharge, he went to work for the Federal Aviation Administration as an Air Traffic Controller.

He later moved to New Jersey where he worked as a Project Manager at NAFEC and the Technical Center. He retired from the FAA and moved to Melbourne in 1983. He worked in real estate for several years before retiring to concentrate on his other interests: bowling, playing with his grandchildren and e-mailing friends and family.

He is survived by his wife of 36 years, Joan; sons, Thomas F. Hierbaum and Mark S. Hierbaum (Marsha) of California, and Randy P. Hierbaum of Merritt Island, FL; daughters, Donna H. Vanaselja (Gordon) and Diana H. Young (David) of Viera, FL and seven grandchildren. ☺

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The WJHTC Intercom is available on-line: <http://www.tc.faa.gov/intercom/intercom.htm>

## MARK YOUR CALENDARS

December 2 has been selected for the Tech Center Holiday Party. It is tentatively scheduled from 11 a.m. to 3:30 p.m.

We are currently in the process of selecting representatives from all Tech Center organizations. If anyone would like to volunteer to be on the committee, please call Ginger Cairnes at 5-4482.